

**THE KROGER COMPANY
FRED MEYER PUYALLUP DISTRIBUTION CENTER
SECTION A1
2200 NORTH MERIDIAN STREET
PUYALLUP, WASHINGTON**



**APPROVED TO
PROCEED SUBJECT TO CITY
INSPECTOR'S APPROVALS
2/17/2022 DL**

INVITATION FOR BIDS

INVITATION FOR BIDS

The Kroger Company hereafter referred to as "Owner" is requesting bids for the re-roofing of specified section of the **Fred Meyer Puyallup Distribution Center, located at 2200 North Meridian Street, Puyallup, Washington.**

BIDS for the specified work will be submitted via the on-line negotiation process hosted by *Coupa* web site located at (<https://krogersource.coupa.com>). The bidders will be contacted by *Coupa* prior to the on-line bid date of **Wednesday, October 6, 2021**. More information can be obtained via email to CorpKes@Kroger.com. One hour after the *Coupa* event closing, email a copy of your Trade Proposal (Section 1E) to operations@roofmgmt.net. Under no circumstance shall your trade proposal form be submitted prior to the close of the *Coupa* event.

PRE-BID CONFERENCE

A Pre-Bid Conference will be held on **Wednesday, September 29, 2021 at 2:00 pm Pacific at Fred Meyer Puyallup Distribution Center, 2200 North Meridian Street, Puyallup, Washington.** An overview of the work to be completed will be discussed at this time. This will be the only opportunity that bidders will be allowed access to the roof area during bidding. Attendance at the Pre-Bid Conference is mandatory to be eligible to submit a bid on this project.

SCOPE OF WORK

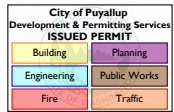
1. **CONSTRUCTION MUST NOT START ON THE FACILITY PRIOR TO JUNE 2022 AND MUST BE 100% COMPLETE INCLUDING FINAL PUNCH LIST BY SEPTEMBER 15, 2022.**
2. **CONTRACTOR MUST BE A CURRENT YEAR MEMBRANE MANUFACTURER'S MASTER CONTRACTOR.**
3. Crew access to be by certified scaffold stair with lockable access. Location to be determined by site engineer.
4. The base bid shall include an allowance for replacement of 3,200 sq/ft of the existing insulation. Any replacement in excess of or less than the 3,200 sq/ft allowance will be adjusted based on the unit price provided on the bid form.
5. Leave the existing membrane in place and relief cut in a 5' grid pattern then install 0.5" High Density cover board (100 P.S.I. minimum) over the existing insulation, mechanically attached with a minimum of eight (8) **#14, standard color** fasteners and plates per 4'x8' board.
6. Install a **new White Mechanically Attached 60 mil Thermoplastic Roof System** and associated flashing. **Standard TPO bonding adhesive** is required for all flashings.
7. Install the specified sheet metal in the color from the membrane manufacturer's color chart, to be approved by the site engineer prior to fabrication.
8. Install 0.5" in 12" tapered Polyisocyanurate saddles at each curb location under the cover board layer.

**INVITATION FOR BIDS
TWO PAGES**

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9. Replace the existing smoke vents including curbs with new JL Industries UDFV-Double Leaf Domed Smoke Vents including related curbs and Integral Safety Screens. Interior barricades and interior monitors are to be in place during replacement. Where indicated on the bid form, provide the line-item cost, which is included in the base bid, for the smoke vents. Refer to Exhibit "G" UDFV -Double Leaf Domed Smoke Vents.
10. Re-size the existing primary scuppers 1" lower on the bottom of the scupper and install eight (8) new overflow scuppers per Detail D-6. Overflow scuppers to match the size of the re-sized primary scuppers with finished opening 2" above the finished field membrane surface. All related costs for any scupper work are to be included in the base bid.
11. Conduit has been identified in random locations against the roof decking. A pre-job walkthrough is required by the awarded contractor to identify locations and take precautions to avoid damage to the conduits. Should damage occur the roofing contractor shall be responsible for damage and repair costs.
12. Where indicated on the Coupa Bid Clarification Form, provide the **Alternate #1 Cost**, for the alternate manufacturer, material delivery date, hail warranty size and total project cost.
13. The roofing contractor is responsible for all mechanical or electrical work associated with the roofing project.
14. The base bid is to include any associated costs for structural or architectural stamped plans, as required, to obtain the required permit in the State of Washington or City of Puyallup.
15. **A minimum of ten (10) person crew is required on this project until membrane installation is complete. Sheet metal installation is to begin within 50% completion of the field membrane installation.**
16. **From the start of the project until substantial completion the contractor must have available 24 hours a day – seven days a week a crew member that can respond immediately to any situations that may arise on the project.**
17. The roofing contractor is responsible for all costs associated with the recalibration to satellite dishes caused by equipment moves during construction and caused during construction project.
18. Provide the contractor's Two (2) Year Warranty as included in this specification on all work performed under this contract.
19. Provide a Manufacturer's Twenty (20) Year Full System Warranty in the format as provided in "Exhibit A" of this specification on all work performed under this contract. **All costs associated with providing the specified warranty shall be included in the base bid.** The warranty shall include the coverage for damage caused by hail stones up to and including 2" in diameter, increased winds speed up to and including 72 MPH for the full term of the warranty and metal paint finish for thirty-five years.



The Kroger Co.

PURCHASE ORDER

Supplier

Scholten Roofing, Inc.
 7157 GUIDE MERIDIAN RD STE 1
 LYNDEN, WA 98264-9213
 United States
 Contact: Gabriela Castillo
 gabrielac@scholtenroofing.com
 Phone: +1 (360) 398-8484

ORDER NUMBER 350080
 ORDER DATE 12/14/21
 PAYMENT TERMS NET 30
 SHIPPING TERMS
 FREIGHT TERMS Prepaid and Add
 FOB TERMS Destination

Ship To

Fred Meyer Logistics-Puyallup
 2200 N Meridian
 Puyallup, WA 98371
 United States
 000015
 Division: 0415-Puyallup Logistics Operations
 Attention: Cliff Rapp

Bill To

Fred Meyer Stores Inc.
 3800 SE 22nd Avenue
 Portland, OR 97202-2918
 United States

Contact Information

Requester: PAUL PRIDEMORE
 Email: paul.pridemore@kroger.com
 Order Created By: ALISSA TERRY
 Email: alissa.terry@kroger.com

Primary Contact: Cliff Rapp

~~354,377~~
 SALES TAX 35,438
 389,815

Note: Roof Replacement Puyallup DC Section A1

Line	Part Number	Description	Unit	Qty	Unit Price	Extended Amount
1		Major Exterior Improvement (roof replacement, etc) for DC/Office Need By Date: Standard Processing Lead Time	Unit	1	389,815.00 USD	389,815.00 USD
						Total 389,815.00 USD

This PO is governed by the terms and conditions contained within the applicable signed Agreement between Supplier and Kroger (or such Kroger subsidiary or affiliate named in this PO and/or in the Agreement) or, in the event no such agreement exists, the applicable terms and conditions contained within The Kroger Co.'s Standard Vendor Agreement and Policies referenced therein, all of which can be found in the [Kroger Document Library](#).

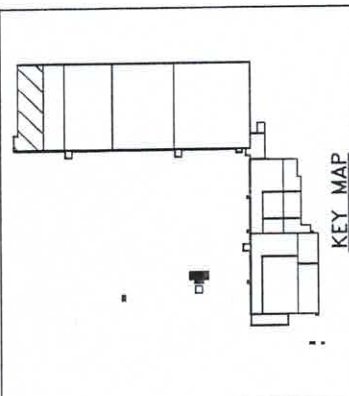
Suppliers must submit invoices through the [Coupa Supplier Portal \(CSP\)](#).

Orders with "Need By Date of: Standard Processing Lead Time", please ship using standard delivery.

Questions regarding this Purchase Order should be directed to the following:

Topic	Contact Information
Sales Tax	RASC: rascetax@kroger.com
Billing	RASC: rascexpense@kroger.com
Order & Scheduling Details	Primary Contact
Delivery	Receiving Location

PRRF20210149



LEGEND

[D-1] DETAIL DRWG.	[] EXHAUST FAN
⊙ HOT PIPE	[] MISC. CURB
• FLASHED PENETRATION	[X] SKYLIGHT
[#] SCUPPER	X CONT. TPO
/// ROOF LEVEL TIE-IN	X WALKPADS
[#] NOT IN (NIC) CONTRACT	[#] NEW OVERFLOW SCUPPER

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FRED MEYER PUYALLUP DC SECTION A1

BUILDING LOCATION:
 2200 NORTH MERIDIAN ST
 PUYALLUP, WA

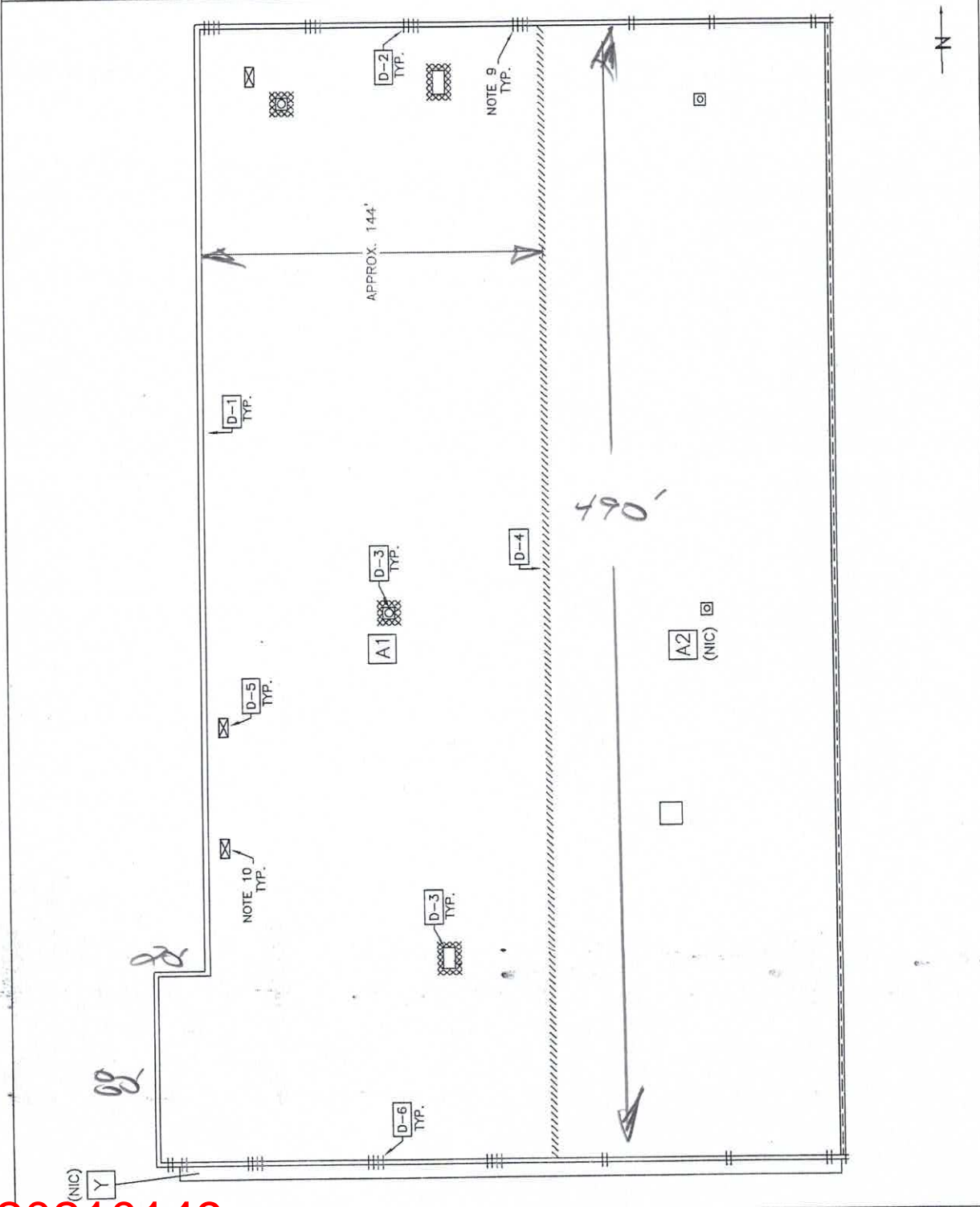
SCALE: RMI # NONE 022-109


DATE: DATE: 9/30/2021
 REVISED: 9/30/2021

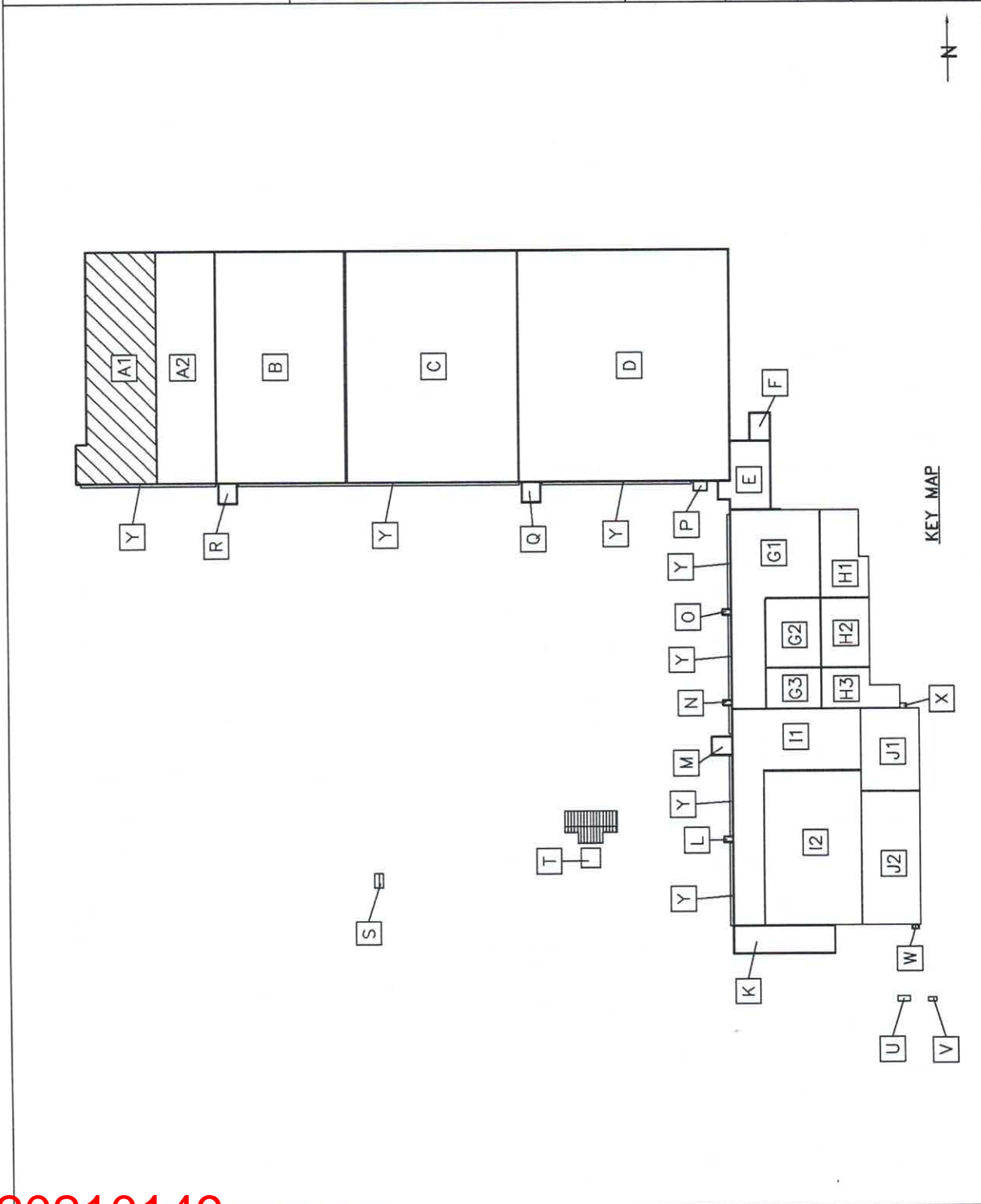
ROOF MANAGEMENT, INC.

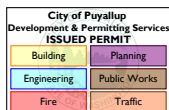
WBENCO
 Certified
 WASHINGTON BUSINESS ENTERPRISE

P.O. BOX 265
 COSHEN, KY 40026
 (502) 228-7298



LEGEND	 AREA IN CONTRACT
© 2021 Roof Management, Inc	
FRED MEYER PUYALLUP DC KEY MAP	
BUILDING LOCATION: 2200 NORTH MERIDIAN ST PUYALLUP, WA	
SCALE: RMI # NONE 022-109	DATE: 9/16/2021
	
Certified WBENC <small>Women's Business Enterprise</small> P.O. BOX 265 COSHEN, KY 40026 (502) 228-7298	





PIN Report

PIN Status: PIN Approved

Contractor: 0040000714 SCHOLTEN ROOFING INC,

Project Number: 4145858

Assignee: Russ Unrein

Project Location:

Fred Meyer Puyallup Distribution Center,
A-1
2200 North Meridian Street
Puyallup, WA 98371

Building Owner Information:

The Kroger Company
1014 Vine Street
Cincinnati, OH 45202

General Information

Project Start Date: **01/01/2022**

Does this PIN require special handling? **Yes**

Special Handling Description: **Firestone/Carlisle Kroger Non-Retail Format Warranty**

Does contract specification require final inspection before closeout? **Yes**

Building Characteristics

Building Use/Type: **Warehouse**

Does this PIN have special access requirements? **No**

Roof Area: Roof Area A, Building Area Name: A-1 Section

Roof Size: 72160 sf

Warranty

Material Type: **Thermoplastic**

System Warranty Type: **Firestone Red Shield**

System Warranty Length: **20**

Increased Wind Speed: **Yes**

Wind Speed: **72**

Hail Coverage: **Yes**

Puncture Coverage: **No**

Material Only Warranty Type: **None**

Are you requesting a Metal Paint Finish Warranty?: **No**

Building Area Details

Building Area Name: **A-1 Section**

Material Type for Building Area: **TPO**

System Type for Building Area: **Mechanically Attached**

Roof Size (Warranted Square Feet): **72160**

Roof Accessibility: **Roof Hatch**

Roof Height (feet): **30**

Parapet Height (inches): **24**

Construction Type: **Reroof**

Reroof Type: **Recover**

Window Cleaning Equipment: **No**

Expected Foot Traffic: **Minimal - Less than Once a Month**

Ground Roughness: **ASCE Exposure B**

Viewable Exposure: **No**

Total Wall openings greater than 10%: **Yes**

Single wall opening greater than 10%: **No**

Deck

Deck Number: **1**

Deck Slope: **3/4 (6%)**

Deck Type: **Plywood**

Deck Thickness or Gauge: **3/4" (19.1 mm)**

Existing Roof

Existing Insulation Layer Number: **1**

Existing Insulation Type: **Isocyanurate**

Existing Insulation Layer Thickness: **3" (76.2 mm)**

Existing Insulation Layer Attachment Method: **Fasteners**

Existing Roof Type: **TPO**

Is Existing Roof Coated?: **No**

Existing Roof Attachment Method: **Mechanically Attached**

Barrier

Air Barrier/Vapor Retarder Type: **None**

Board Type: **None**

CoverBoard

Coverboard Type: **ISOGARD HD Cover Board**

Thickness: **1/2" (12.7 mm)**

Attachment Method - Field: **Fasteners**

Attachment Method - Perimeter: **Fasteners**

Attachment Method - Corner: **Fasteners**

Fastener Type: **All Purpose Fastener**

Fastener Lengths: **5.00**

Coverboard Board Size: **4' x 8'**

Attachment Rate - Field: **8 per Board**

Attachment Rate - Perimeter: **8 per Board**

Attachment Rate - Corner: **8 per Board**

System

Membrane Type: **UltraPly TPO**

Membrane Thickness: **0.060" (1.52 mm)**

Membrane Color: **White**

Seam Type: **Single Weld**

Seam Width: **1.5"**

Membrane Attachment Method: **Mechanically Attached**

UltraBlend System: **Yes**

Mechanically Attached Type: **In-Seam Attachment**

Mechanically Attached Bar or Plate Type: **HD Seam Plate (Stacked)**

Membrane Attachment Fastener Type: **Firestone HD Fastener**

Membrane Fastener Lengths: **5.00**

Membrane Fastener Spacing: **12" o.c.**

Membrane Panel Width or Fastener Row Spacing: **10'**

Number of Perimeter Sheets: **3**

Perimeter Sheet Width: **5'**

Additional Comments for Building Area?: **No**

Accessories

Does this Roof Area have edge details requiring edge metal?: **No**

Are walk pads installed on this area?: **Yes**

Walk Pad Type: **UltraPly TPO Walkway Pad**

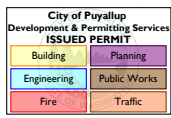
Walk pad Linear Footage: **100**

Is yellow safety tape installed on this area?: **No**

Are pavers being installed on this area?: **No**

Is a Garden Roof System being installed on this area?: **No**

Is Firestone Daylighting being installed on this section?: **No**



Is Photovoltaic System being installed on this area?: **No**

Is other overburden being installed on this area?: **No**

Comments & Attachments

Additional Comments for PIN: **No**

Tax Exempt Project: **No**



UltraPly™ TPO (TPO 96 & 120)

Firestone Item Number: See Product List

DESCRIPTION:

Firestone UltraPly™ TPO is a flexible Thermoplastic Polyolefin roofing membrane that is produced with a polyester weft inserted reinforcement. This heat weldable TPO membrane is available in .045 mil (1.1 mm) and .060 mil (1.5 mm) thicknesses in both 8' (TPO 96) and 10' widths (TPO 120). Additional thicknesses are available on special orders. Available in white (tan or gray on special orders), this reflective membrane is suitable for a variety of low slope applications.

METHOD OF APPLICATION:

1. Firestone UltraPly TPO membrane is installed as a continuous roofing or waterproofing layer on the roof. Rolls are overlapped (Side Laps and End Laps) prior to the heat welding of the seam areas.
2. Install the UltraPly TPO Roofing System in accordance with current Firestone UltraPly TPO specifications, details and workmanship requirements.

Please contact Firestone Roofing Solutions Department for additional information.

PHYSICAL PROPERTIES PER ASTM 6878-03:

Property	Test Method	Typical
UNAGED PROPERTIES:		
Thickness, min. in (mm)	45 mil	.045" (1.143 mm) ± 10%
Sheet Overall	60 mil	.060" (1.52 mm) ± 10%
Thickness Over Scrim	ASTM D 4637	
.045" Membrane	(Optical Method)	0.018" (0.457 mm) ± 10%
.060" Membrane		0.024" (0.609 mm) ± 10%
Breaking Strength	ASTM D 751	350 lbf (1560 N)
Elongation at Reinforcement break	ASTM D 751	30%
Tearing Strength	ASTM D 751 (8"x8" specimen)	86 lbf (382 N)
Brittleness Point	ASTM D 2137	-50°F (-46°C)
Linear Dimension Change	ASTM D 1204 (6 hrs @70° C)	±0.15%
Ozone Resistance	ASTM D 1149	PASS (no cracks)
Factory Seam Strength	ASTM D751	65 lbf (289 N)
Puncture Resistance	FTM 101C Method 2031	265 lbf (1174 N)
Solar Reflectance	ASTM C 1549	.79



PRODUCT DATA

PHYSICAL PROPERTIES PER ASTM 6878-03 (CONT.):

Property	Test Method	Typical
AGED PROPERTIES:		
Breaking Strength	ASTM D 751	366 lbf (1628 N)*
Elongation at Reinforcement Break	ASTM D 751	30%*
Tearing Strength	ASTM D 751 (8"x8" specimen)	86 lbf (382 N)*
Weight Change (Membrane)	ASTM D 471	1% (change in mass)
AGED PROPERTIES:		
Ozone Resistance	ASTM D 1149	PASS (no cracks)
Weather resistance (Retained Values)	ASTM G 151/ G 154	
Visual Inspection		PASS
Breaking Strength, % min.		90 % retained
Elongation at Reinforcement Break	ASTM D 751	90% retained
Resistance to Xenon-Arc Weathering	ASTM G 151/ G 155	PASS

*ASTM D 6878-03 requires retained values of 90% or original breaking strength and elongation and 60% for tearing strength.

PRODUCT DATA:

Gauge	Width	Length
.045"	5 ft (1.52 m)	100 ft (30.48 m)
	8 ft (2.43 m)	100 ft (30.48 m)
	10 ft (3.04 m)	100 ft (30.48 m)
.060"	5 ft (1.52 m)	100 ft (30.48 m)
	8 ft (2.43 m)	100 ft (30.48 m)
	10 ft (3.04 m)	100 ft (30.48 m)

PRECAUTIONS:

1. Exercise caution when lifting, moving, transporting, storing or handling membrane rolls to avoid sources of punctures and possible physical damage.
2. Contact Firestone Roofing Solutions Department for specific recommendations regarding chemical or waste product compatibility with Firestone UltraPly TPO Membrane.



UltraPly™ TPO Flashing

Firestone Item Number: W56TPO3017

DESCRIPTION:

Firestone UltraPly™ TPO Flashing is a non-reinforced thermoplastic polyolefin membrane designed to be used in roofing applications where Firestone pre-molded TPO accessory products are not appropriate.

PREPARATION OF SUBSTRATES:

1. Substrates must be clean, dry, smooth, free of sharp edges, fins, loose or foreign materials, oil, grease, and other materials which may damage the membrane.
2. All rough surfaces which could damage the membrane shall be repaired prior to installing the membrane, as specified.
3. All surface voids greater than 1/4" (6.4 mm) wide shall be properly filled with an acceptable fill material.

METHOD OF APPLICATION

Install the Firestone UltraPly TPO Unsupported Flashing material with the appropriate heat welding equipment in accordance with current Firestone UltraPly TPO specifications, details and workmanship requirements.



PRODUCT DATA

PHYSICAL PROPERTIES:

Property	Test Method	Typical
Membrane Thickness	ASTM D-638	.060 +/- 10%
Tensile Strength	ASTM D-638	1780 psi (12.3 MPa)
Elongation at Break	ASTM D-638	750% min
Tearing Strength	ASTM 1004 (Die C)	16 lbf (71 N)
Brittleness Point	ASTM D-2137	-40° F (-40° C) min
Properties After Heat Aging		
Tensile Strength	ASTM D-638	1550 psi (10.7 MPa)
Elongation at Break	ASTM D-638	650% min
Tearing Strength	ASTM 1004 (Die C)	12 lbf (53 N)

PRODUCT DATA:

Material: Thermoplastic Polyolefin (TPO)
Color: White
Size: 24" x 50' (7.3 m x 15.2 m) rolls
Thickness: 0.060" (1.52 mm) ± 10%

STORAGE:

Store material in its original unopened packaging away from sources of physical damage or chemical contamination.

PRECAUTIONS:

1. Exercise caution when lifting, moving, transporting, storing or handling membrane rolls to avoid sources of punctures and possible physical damage.
2. Contact Firestone Roofing Solutions Department for specific recommendations regarding chemical or waste product compatibility with Firestone UltraPly TPO Membrane.

LEED INFORMATION:

Post Consumer Recycled Content: 0%
Post Industrial Recycled Content: 0%
Manufacturing Location: Wellford, SC

This sheet is meant only to highlight Firestone's products and specifications. Information is subject to change without notice. Firestone takes responsibility for furnishing quality materials, which meet Firestone's published product specification. As neither Firestone itself nor its representatives practice architecture, Firestone offers no opinion on, and expressly disclaims any responsibility for the soundness of any structure on which its products may be applied. If questions arise as to the soundness of a structure, or its ability to support a planned installation properly, the Owner should obtain opinions of competent structural engineers before proceeding. Firestone accepts no liability for any structural failure or for resultant damages, and no Firestone Representative is authorized to vary this disclaimer.

Firestone Building Products Company
A Division of BFS Diversified Products, LLC
310 E. 96th Street, Indianapolis, IN 46240
Sales: (800) 428-4442 • Technical (800) 428-4511
www.firestonebpco.com



UltraPly TPO™ T-Joint Cover



PRODUCT DATA

Firestone Item Number: W56TPO3014 (White)
W56TPOG014 (Grey)
W56TPOT014 (Tan)

DESCRIPTION:

Firestone UltraPly™ TPO T-Joint Covers are made from a flexible non-reinforced thermoplastic polyolefin membrane. They are designed to cover and seal all T-joints formed at seam intersections for UltraPly TPO membranes greater than .045" (1.1 mm) thick.

PREPARATION OF SUBSTRATES:

Prepare T-Joint area by removing all dirt and debris from membrane surface. Clean the surface area of the field sheet and the T-Joint Cover with Firestone Splice Wash SW-100 or a Firestone approved membrane wash prior to installation of Firestone TPO T-Joint Covers.

METHOD OF APPLICATION

Install the UltraPly TPO T-Joint Covers in accordance with current Firestone UltraPly TPO roofing specifications and details for membranes greater than .045" (1.1 mm) thick.

PRODUCT DATA:

Size: 4" x 4" (101.6 mm x 101.6 mm)
with 1/2" (12.7 mm) radius corners
Thickness: 0.060"(1.52 mm) + 10%

PACKAGING:

UltraPly TPO T-Joint Covers are packaged with 100 T-Joint Covers per box

PHYSICAL PROPERTIES:

Property	Test Method	Typical
Membrane Thickness	ASTM D-638	.060 +/- 10%
Tensile Strength	ASTM D-638	1780 psi (12.3 MPa)
Elongation at Break	ASTM D-638	750% min
Tearing Strength	ASTM D-1004 (Die C)	16 lbf (71 N)
Brittleness Point	ASTM D-2137	-40° F (-40° C) min

Properties After Heat Aging (166 Hours at 240° F)

Tensile Strength	ASTM D-638	1850 psi (12.8 MPa)
Elongation at Break	ASTM D-638	650% min
Tearing Strength	ASTM D-1004 (Die C)	12 lbf (53 N)

STORAGE:

Store material in its original unopened packaging away from sources of physical damage or chemical contamination.

PRECAUTIONS:

Exercise caution when lifting, moving, transporting, storing or handling Firestone UltraPly TPO T-Joint Covers to avoid sources of puncture, physical damage or chemical contamination. Contact Firestone Roofing System Solutions Department for specific recommendations regarding chemical or waste product compatibility with Firestone UltraPly TPO T-Joint Covers.

LEED INFORMATION:

Post Consumer Recycled Content: 0%
Post Industrial Recycled Content: 0%
Manufacturing Location: Wellford, SC

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www.firestonebpc.com



UltraPly™ TPO Small And Large Pipe Flashing

Firestone Item Number:

Small 1" to 3-1/2": W56TPO3012
Large 4" to 8": W56TPO3013

DESCRIPTION:

Firestone UltraPly™ TPO Pipe Flashings are specifically designed to be used in roofing applications for flashing of round penetrations. Each pipe boot will fit various penetrations and shall be cut at the correct place to insure a tight fit before installation.

METHOD OF APPLICATION:

1. Penetration shall be clean of prior flashings or foreign material. Select the pipe boot size that corresponds to the outside diameter of the penetration to be flashed. Cut out a circle on the outside of a level ring of the pipe boot that is smaller than the penetration. Cut the extra material from the pipe boot base around the indented circle. Heat weld the boot into place and install the clamp and sealant per current UltraPly TPO specifications.

PHYSICAL PROPERTIES:

Material: Thermoplastic Polyolefin
Color: White
Sizes: Small and Large
Clamp: All stainless steel – quick release – worm gear type

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PRODUCT DATA

PRODUCT DATA:

<u>Pipe Boot Size</u>	<u>O/D of Penetration</u>	<u>Pieces/Carton</u>
Small	1" to 3 1/2" 25.4 mm to 88.9 mm	10
Large	4" to 8" 101.6 mm to 203.2 mm	10

NOTE: Clamps are included.

PRECAUTIONARY DATA:

1. Refer to Material Safety Data Sheets for all applicable components of UltraPly Systems.

LEED INFORMATION:

Post Consumer Recycled Content: 0%
Post Industrial Recycled Content: 0%
Manufacturing Location: Wellford, SC

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A Division of BFS Diversified Products, LLC
310 E. 96th Street, Indianapolis, IN 46240
Sales: (800) 428-4442 • Technical (800) 428-4511
www.firestonebpco.com

Firestone
BUILDING PRODUCTS COMPANY

UltraPly™ Bonding Adhesive

Firestone Item Number: W56TPO3005

DESCRIPTION:

Firestone UltraPly™ Bonding Adhesive is a solvent based contact adhesive designed specifically for bonding Firestone UltraPly TPO 96 and 120 membranes to approved insulations in addition to wood, metal, masonry and other acceptable substrates.

Note: Not for use in adhering Firestone TPO XR membranes.

METHOD OF APPLICATION:

1. Surfaces that will receive Firestone UltraPly TPO Bonding Adhesive must be clean, smooth, dry, free of sharp edges, loose and foreign materials, oil, grease, and other contaminants.
2. Stir the adhesive thoroughly (to achieve a uniform mix with no sediment on the bottom and no marbling evident) before and during use. Apply Bonding Adhesive at about the same time to both the exposed underside of the sheet and the substrate to which it will be adhered so as to allow approximately the same drying time. Apply Bonding Adhesive evenly avoiding areas of accumulation. Apply the Bonding Adhesive with a solvent resistant paint roller, and roll the adhesive onto the mating surfaces. When applying Bonding Adhesive, ensure complete uniform coverage of both surfaces that will be adhered. Care must be taken not to apply Bonding Adhesive over seam areas.
3. UltraPly Bonding Adhesive can be dispensed by means of Garlock Power Roller or Garlock Spray Equipment. Other equipment may be used as recommended by the manufacturer for application of this adhesive.

Garlock 25T Power Roller:

4 CFM Compressor, 60-80 P.S.I. Air Pressure
25-Gallon Tank
(2) 3/4" Hoses X 30' Long with Swivels
(2) 18" Roller Head Assemblies

Garlock 314 Glue Machine:

1 Gallon per Minute Flow, 4,000 P.S.I. Rated
1" Intake Pipe
25 or 50 Feet of 1/2" Hose suitable for Solvent Based Adhesives and/or Cleaning/Flushing Solvents
Tip Size: .023"-.031"
Ground Machine to Approved Source

Garlock Commander 2120 Assembly:

5 Gallon per Minute Flow, 1200 P.S.I. Pressure (minimum)
50-100 Feet of 1/2" Hose suitable for Solvent Based Adhesives and/or Cleaning/Flushing Solvents
Tip Size: .023"-.031"
Ground Machine to Approved Source



PRODUCT DATA

Notes: Spray applied bonding adhesive requires back rolling with 9" wide solvent resistant roller (medium nap) to insure 100% coverage of the adhesive on the substrate and membrane.

4. Allow Bonding Adhesive to flash off until tacky. Touch down on the Bonding Adhesive surface with a clean, dry finger to be certain that the adhesive does not string. As you are touching the adhesive, pushing straight down to check for stringing, also push forward on the adhesive at an angle to ensure that the adhesive solvents have flashed off and is ready throughout its thickness. If either motion exposes wet areas or sticking when the finger is lifted, then it is not ready for mating. Flash off time will vary depending on ambient conditions.
5. Starting at the fold, roll the previously coated portion of the sheet into the coated substrate slowly and evenly so as to minimize wrinkles. To ensure proper contact, compress the bonded half of the sheet to the substrate with a stiff push broom using heavy pressure immediately after mating.

PHYSICAL PROPERTIES:

Base:	A blend of Polychloroprene and SBR rubbers
Color:	Yellow
Solvents:	A blend of Acetone, Hexane, Toluene and Xylene
Viscosity:	3,300-3,800 cps, with R.V.F. spindle @ 10 rpm
Weight/Gallon:	6.6-7.4 lb/gal
Specific Gravity:	0.7909-0.8868
V.O.C. Content:	633 gm/L

*Available in 5 gallon (18.9 Liters) pails.

COVERAGE RATE:

1. A coverage rate of 45-60 square feet per gallon (1.10-1.47 m² / liter) may be obtained depending on the substrate. Some insulation surfaces are more uneven and porous and will result in a lower coverage rate while smooth non-porous substrates will result in higher coverage rates. Rates are based on roller application to both mating surfaces.
2. Very porous substrates (rough wood, concrete block) may require two coats of Bonding Adhesive, to ensure proper adhesion. This can be determined by testing a small area. Check by adhering a small piece of UltraPly membrane to the porous substrate to verify the bonding strength.

SHELF LIFE:

1. Shelf life of one year can be expected if stored in original sealed container at temperatures between 60° F and 80° F (16° C - 27° C). If exposed to lower temperatures, restore to room temperature prior to use.
2. Shelf life will be shortened if exposed to elevated temperatures for a prolonged period of time.

STORAGE:

1. Store in original unopened containers at temperatures between 60° F - 80° F (16° C - 27° C) until ready for use.
2. For optimum use, rotate your stock to ensure stored material has not exceeded the shelf life of one year.

PRECAUTIONS:

1. Review Material Safety Data Sheet specified on the bonding adhesive container label.
2. Flammable. Keep away from fire and open flame and other possible ignition sources during storage and use. Do not smoke when using.
3. Read caution labels.
4. Avoid prolonged contact with skin.
5. Use only in well ventilated areas.
6. Do not contaminate with foreign materials.
7. For professional use only.
8. Keep out of reach of children.
9. Thinning is not allowed.
10. Review Firestone TIS Number 1705; Recommended Guidelines For Application of Roofing Adhesives To An Occupied Building.

PHYSICAL CHARACTERISTICS AFTER APPLICATION:

1. Excellent resistance to aging.
2. Good resistance to heat, cold, and water.
3. Excellent tack time for versatility of installation.

LEED INFORMATION:

Post Consumer Recycled Content: 0%
 Post Industrial Recycled Content: 0%
 Manufacturing Location: South Bend, IN



Subject to the conditions of Approval when installed as described in the current edition of the FM Approval Guide



Cements and Coatings for Roofing Systems
 As to an External Fire Exposure Only
 61P2
 See UL Directory of Products
 Certified for Canada
 And UL Roofing Materials
 And Systems Directory
 R9516

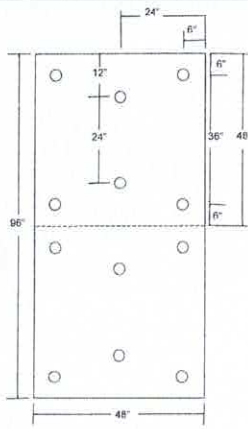
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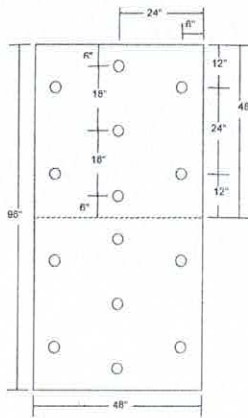
UltraPly™ Bonding Adhesive

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 310 E. 96th Street, Indianapolis, IN 46240
 Sales: (800) 428-4442 • Technical (800) 428-4511
www.firestonebpco.com

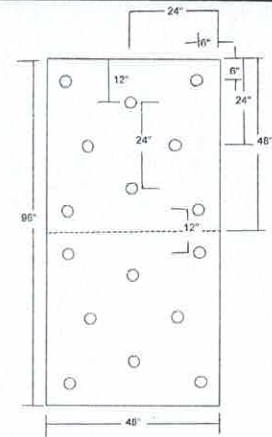
TECHNICAL INFORMATION SHEET



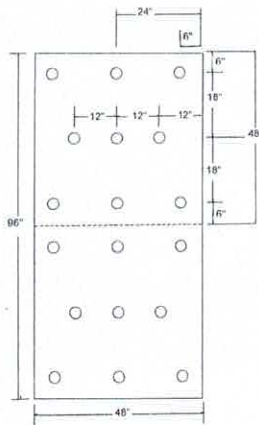
12 fasteners



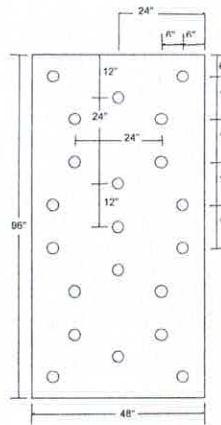
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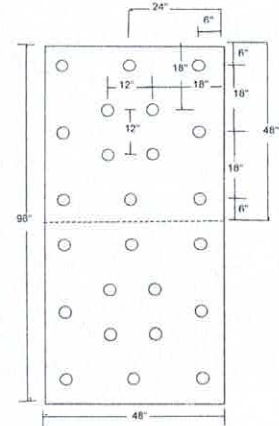
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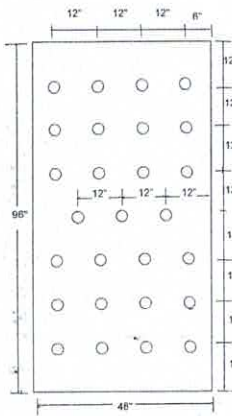
18 fasteners



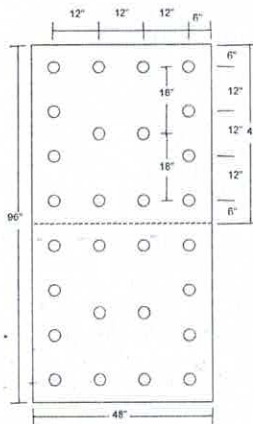
21 fasteners



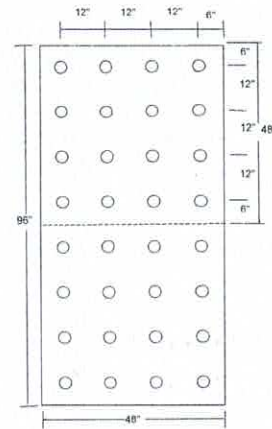
24 fasteners



27 fasteners



28 fasteners



32 fasteners

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All-Purpose Fastener

Firestone Item Number:

Red		White*	
1-1/4":	W56RAC4200	1-1/4":	W56RAC4199
1-5/8":	W56RAC4201	2-1/4":	W56RAC4215
2-1/4":	W56RAC4202	2-7/8":	W56RAC4216
2-7/8":	W56RAC4203	3-1/4":	W56RAC4217
3-1/4":	W56RAC4204	3-3/4":	W56RAC4218
3-3/4":	W56RAC4205	4-1/2":	W56RAC4219
4-1/2":	W56RAC4206	5":	W56RAC4220
5":	W56RAC4207	6":	W56RAC4221
6":	W56RAC4208	7":	W56RAC4222
7":	W56RAC4209	8":	W56RAC4223
8":	W56RAC4210		

*Firestone is not responsible for, nor guarantees that the white coating will remain on the fastener during or after installation.

Because the coating on Firestone's white fasteners is removed to some degree during the installation process, Firestone suggests that 1) the building owner be made aware of the expectations of the white fasteners and that re-painting of the deck may be required after roofing is complete or 2) any deck painting take place after the roof is installed. In this case, any color of screw will work.

DESCRIPTION:

Firestone All-Purpose Fasteners are used in roofing applications for the attachment of roofing insulation and base sheets in combination with Firestone Insulation Plates and attachment of Firestone Batten Strips, Seam Plates, Termination Bars, and other accessories to steel and wood substrates where approved by Firestone Technical Specifications. The Firestone All-Purpose Fastener is Factory Mutual (FM) approved.

METHOD OF APPLICATION:

Using the #3 Phillips tip provided, and a variable speed drill, engage the fastener into the deck as noted below, taking care not to over or under drive the fastener. Threads must engage the decking material per Firestone Technical Specifications.

PRECAUTIONS:

1. Eye protection must be worn during the installation of the fasteners.

Note: All-Purpose fasteners may not work as expected through existing roof systems or unusual substrates. Consideration should be given to using Firestone HD fasteners in these instances.

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PRODUCT DATA

Property	Minimum Performance
Material:	SAE 1022, heat treated steel
Thread Size:	.235"(6.5 mm)
Threads/Inch:	13
Thread Design:	Symmetrical
Fastener Tip:	Drill point
Fastener Head:	#3 Phillips drive
Pullout in New 22 ga. (0.76 mm) Steel Deck:	
Grade C (Grade 33):	360 lb (163.3 kg)
Grade E (Grade 80):	400 lb (191.4 kg)
Pullout in New 3/4" (19.0 mm) Plywood Deck:	400 lb (181.4 kg)
Corrosion Resistant Coating:	Red epoxy applied by Electrocoating

Screw Length	Thread Length	Pieces/ Plastic Pail
1-1/4" (31.75 mm)	Full	1,000
1-5/8" (41.28 mm)	Full	1,000
2-1/4" (57.15 mm)	Full	1,000
2-7/8" (73.03 mm)	Full	1,000
3-1/4" (82.55 mm)	3" (76.2 mm)	1,000
3-3/4" (95.25 mm)	3" (76.2 mm)	1,000
4-1/2" (114.3 mm)	3" (76.2 mm)	1,000
5" (127.0 mm)	4" (101.6 mm)	1,000
6" (152.4 mm)	4" (101.6 mm)	1,000
7" (177.8 mm)	4" (101.6 mm)	500
8" (203.2 mm)	4" (101.6 mm)	500

Typical color is red.

Determine required screw length as follows:

- Steel Decks: Select fastener length to penetrate through the deck a minimum of 3/4" (19.1 mm).
- Wood Decks: Select fastener length to penetrate into or through the deck a minimum of 1" (25.4 mm).

LEED INFORMATION:

Post Consumer Recycled Content:	25%
Post Industrial Recycled Content:	0%
Manufacturing Location:	Bryan, OH



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MB 2" Barbed Metal Lap Plate

Firestone Item Number: W56RAC4183

DESCRIPTION:

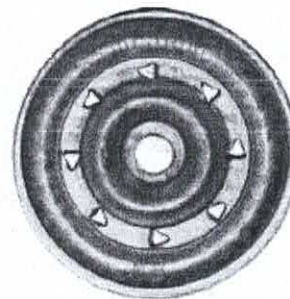
The Firestone MB 2" Barbed Metal Lap Plates are specifically designed to be used as seam plates for attachment of specific Firestone Modified Bitumen Base Ply membrane to the approved substrate. Firestone MB 2" Barbed Metal Lap Plates are suitable for use with Firestone Fasteners into a variety of decking materials.

METHOD OF APPLICATION:

Position Firestone MB 2" Barbed Metal Lap Plate within seam area as specified by Firestone Asphalt specifications. Attach Firestone MB 2" Barbed Metal Lap Plate through the Firestone Base Sheet membrane to roof deck substrate using a Firestone Fastener. Orient and install the barbed plate with the barbs penetrating the membrane and with the ribbed side up, showing the "Firestone" name on the plate. Immediately heat weld the lap.

PRECAUTIONARY DATA:

1. Do not overdrive or underdrive fastener.
2. Firestone MB 2" Barbed Metal Lap Plates are designed to anchor the Firestone Modified Bitumen membrane system.
3. Avoid field seams directly over insulation plates.



PRODUCT DATA

Properties

Minimum Performance

Material:	Galvalume® - Sheet Steel - AZ55
Material Thickness:	35 mil (0.9 mm)
Corrosion Resistance:	Meets FM 4470 criteria
Pull Through Resistance:	400 lbf (178 daN) from center hole
Diameter:	2" (50.8 mm)

Note: Galvalume® is a registered trademark of BIEC International Inc.

PRODUCT DATA:

1. Plates are labeled: "Firestone MB".
2. Plates are circular shaped, 2" (50.8 mm) in diameter.
3. Plates have eight (8) evenly spaced barbs for additional holding power.

PACKAGING:

1,000 Plates per carton.
40 Pails per pallet.

STORAGE:

Store in original unopened containers protected from the weather.

LEED INFORMATION:

Post Consumer Recycled Content:	8%
Post Industrial Recycled Content:	17%
Manufacturing Location:	Cleveland, OH



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TECHNICAL INFORMATION SHEET

ISOGARD™ HD Cover Board

(New Formulation)

LEED® Information:

Recycled Content: approximately 9%*

*Contains post industrial recycled content.

Manufacturing Locations: Corsicana, TX Youngwood, PA Jacksonville, FL
DeForest, WI Florence, KY Bristol, CT

Manufactured in an ISO 9000 Registered Facility

FM Global Approved when applied with the fastening pattern shown.

*NOTE: LEED® is a registered trademark of the U.S. Green Building Council.



ASTM C1289 Type II, Class 4

Typical Properties

Property	ASTM Standard	Typical Values	
<u>Compressive Strength</u>			
Grade 1	D1621	≥ 80 psi (≥ 551 kPa)	
Grade 2	D1621	≥ 120 psi (≥ 827 kPa)	
<u>Weight</u>		<u>4' x 4' (1.2 m x 1.2 m)</u>	<u>4' x 8' (1.2 m x 2.4 m)</u>
Grade 1	---	5.5 lb (2.5 kg)	11 lb (5 kg)
Grade 2	---	6 lb (2.7 kg)	12 lb (5.4 kg)
Dimensional Stability	D2126	<0.5%	
Water Absorption	C209	<3%	
Service Temperature	---	-100 to 250 °F (-73 to 121 °C)	
Resistance to Mold	D3273	pass	
Flute Span over metal decks	---	2.625" (66.7 mm)	
Flame Spread	E84	50	
Smoke Developed	E84	160-180	
Thermal Resistance	C518	2.5 R	

Acceptable Substrates

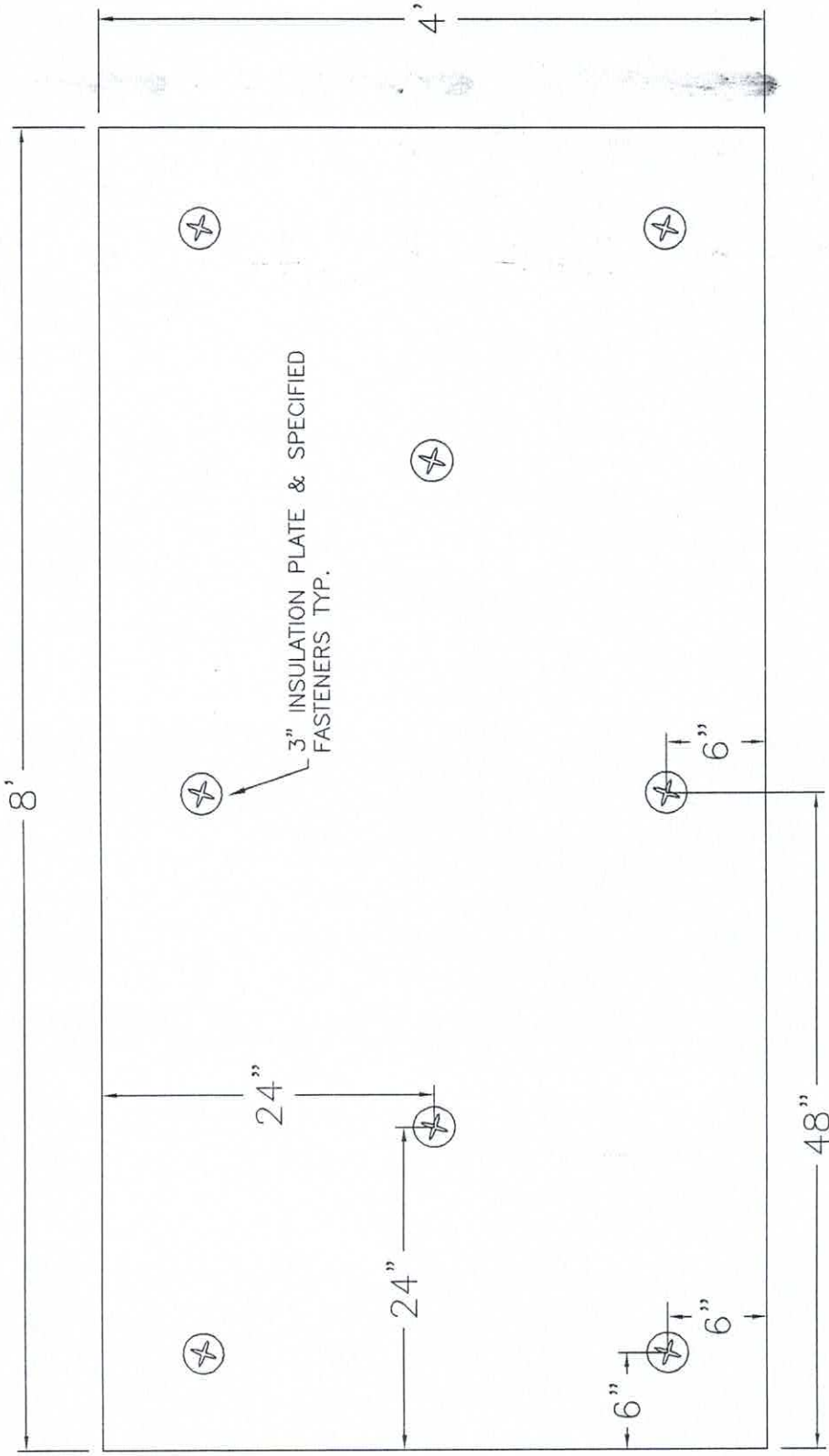
Property	NOTE
Structural Concrete, 3000 psi (New & Existing)	Please consult Membrane Design Guides on line at www.firestonebpc.com to review specific information regarding fastener types appropriate for the type of deck and insulation in use.
Steel, min. 22 gauge	
Lightweight Concrete*	
Plywood and OSB, min. 1/2"	
Gypsum, min. 2"	
NOT ACCEPTABLE	Do not use hot asphalt to adhere ISOGARD HD cover boards. Firestone ISOGARD HD cover board is not suitable as an immediate substrate for a ballasted roof system.

* A vapor retarder is required to be installed under systems with insulation. A properly prepared, existing, dry and sound, uninsulated built-up roof system (all splits and blisters repaired) can be used as a vapor retarder.

NOTE: Be sure to use the required fastener for an FM approved system.

Please contact Firestone Technical Services Department at 1-800-428-4511 for further information.

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022-109
 D-7

TITLE ISOGARD HD
 MECHANICAL ATTACHMENT
 PATTERN

JOB FRED MEYER PUYALLUP DC
 SECTION A1
 PUYALLUP, WA.

DWN DLC	DATE 9/16/2021
DATE	

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 (502) 228-7298

